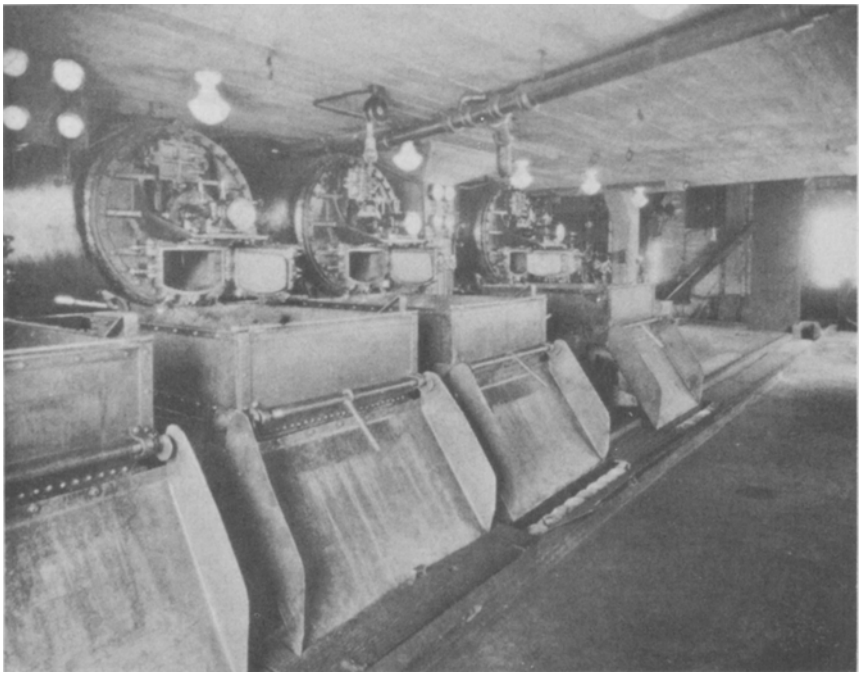
Rendering Plant Cuts Labor to Two Men by Conveyers

How Milwaukee Retail Tallow and Calf Skin Association Renders Its Own Waste and Clears a Nice Profit

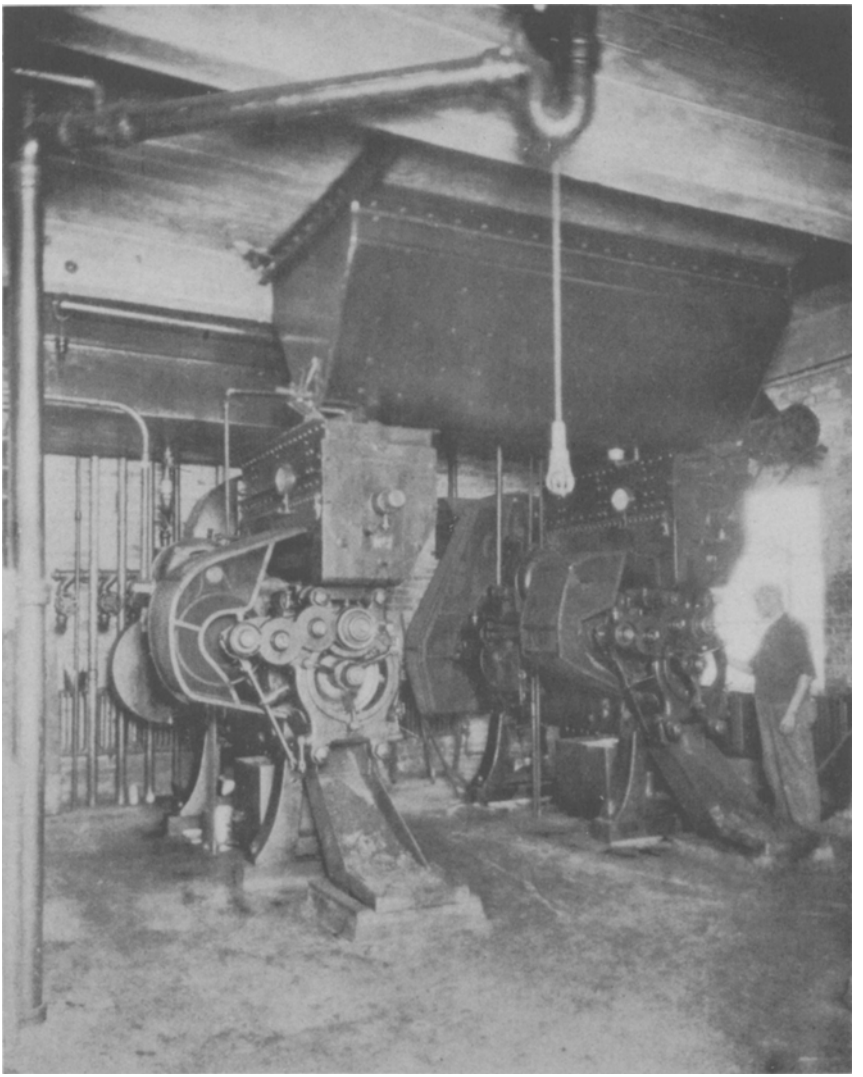
By L. G. DROEGER



The cookers. Meat scraps are cooked here until 80 per cent of the fat has been removed and drained. The residue is then drawn off and carried away by the spiral conveyer on the floor.

A PROFITABLE arrangement for the extraction of oil and fat from the waste gathered at retail meat markets is in operation at the plant of the Retail Tallow and Calf Skin Association at Milwaukee, Wisconsin. The plant is one of unusual interest; not only because of the high degree of efficiency it represents, as a result of which many have visited it from all over the United States for the purpose of studying its operation; but also by reason of the fact that no engineers were consulted in its design.

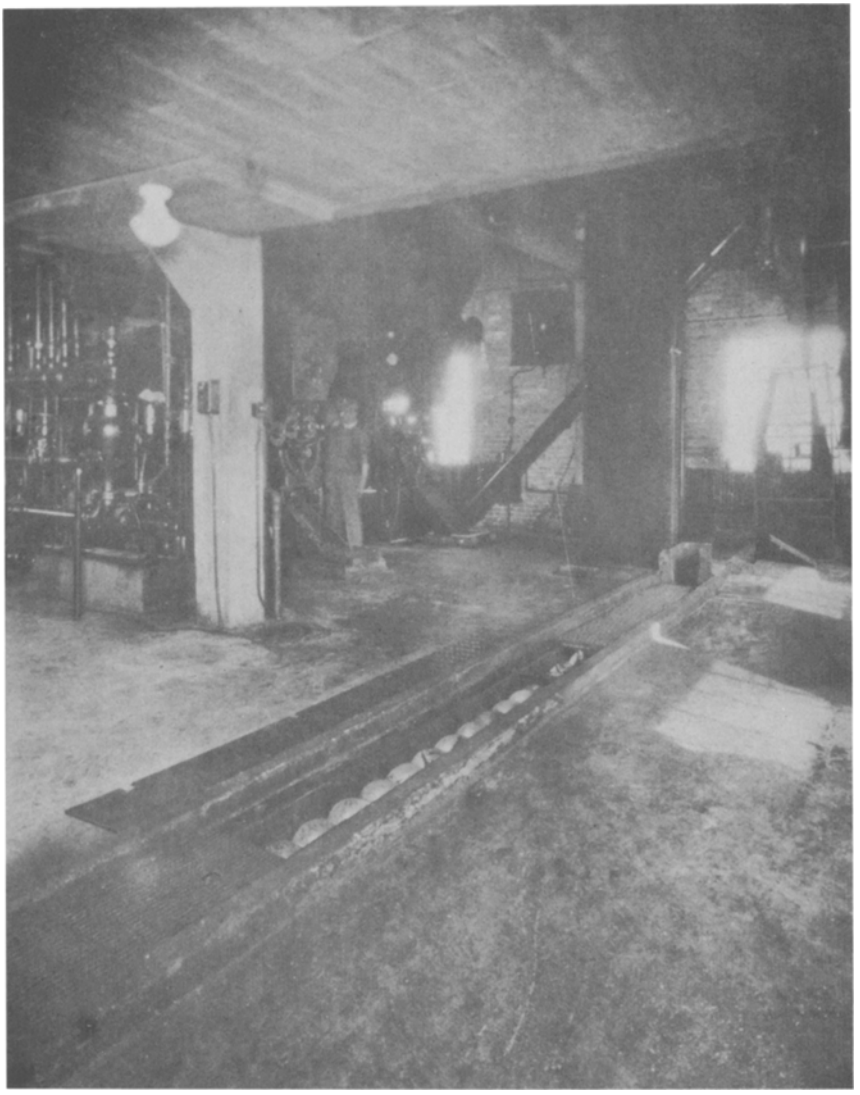
The Retail Tallow and Calf Skin Association is composed of retail market owners in Milwaukee. Formerly they disposed of their waste materials to rendering plants owned and operated by outside interests. And as is frequently the case of "independent" rendering plants, they sometimes become too independent. Such, indeed was the



The residue from the cookers is run through crushers and the remaining 20 per cent fat removed. The fat goes to storage tanks and the meat drops down into containers to be sacked as feed.

case here. These people simply would not pay the retail market owners what the latter considered was a fair price for this waste.

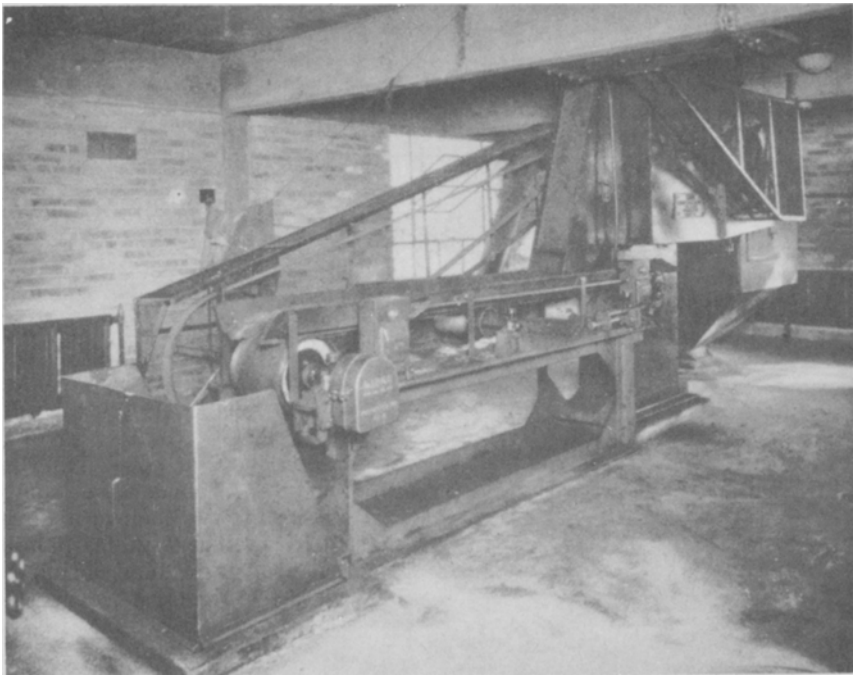
All this was before the Retail Tallow and Calf Skin Association existed as such. One day the retailers got worked up to a point where they felt something ought to be done, and that was how the Association came to be formed. As stated, the plant was designed



The Rex spiral conveyor leading to the elevator. Residue from the cookers is carried up to floor above.

without outside assistance. The project was financed in one of the simplest and most economical ways by which any rendering plant has ever been put up. Members are now getting more for their product than formerly. And what gives them the most satisfaction, they can always feel sure of a market for their waste at the time they wish to dispose of it.

The operating plan is simplicity itself, and its chief charactertistic is the way in which automatic con-



Showing head of the elevator which carries residue from the cookers (Fig. 1) to the crushers (Fig. 4). The belt conveyor is magnetized and takes all metal from the residue. This residue is then dumped down a chute into a storage bin above the crushers.

veying equipment has been utilized so as to reduce labor to a minimum. Indeed, all the rendering in the entire plant is done by two men; whereas most establishments of the same size require six on an average. The Association pays a gracious compliment to the Chain Belt Company of Milwaukee, manufacturers of the Rex conveying equipment installed here, and attributes the success achieved largely to this equipment.

The raw material, which includes bones and scrap meat ends, is taken to the top floor of the plant and is started on its course from there. Four high pressure vacuum cookers break down the bone and meat structure and loosen the fat content. After the material is thoroughly cooked it goes into percolators. The free fat is allowed to drain and is pumped to a settling tank on the floor above.

The remaining scrap, which still contains a large amount of oil, is charged into a Rex spiral conveyor directly under the cookers. The conveyor running the length of the floor carries the material to a Rex bucket elevator into which it feeds. The elevator raises the material to the floor above and discharges directly onto a metallic separator. The small parts of metal, such as nails and staples, are then removed by this piece of machinery, which consists of a belt conveyor running over a magnetized pulley. All particles of metal cling to the belt until they pass the dead center of

the pulley, and then fall into a pan below. From here the free material drops into a measuring hopper above the expellors. A right and left worm conveyor deliver it respectively into these two machines, which press out all but 7 per cent of the remaining fat.

The pressed substance, which is now quite dry, is blown by a pneumatic conveyor to the top floor. It is then ground and dropped to the first floor where it is weighed and sacked for shipment. This product is sold for protein content and there are many formulas for its use. It can be used as chicken or hog feed, and when mixed is an excellent fertilizer.

The oil is taken from the settling tank weighed and stored in four large vats on the first floor ready for shipment. The tank room is constantly kept heated in order that the oil may be pumped at any time into the waiting cars. The greater percentage of this product is sold for the making of soap.

A Correction

In the January issue of OIL AND FAT INDUSTRIES, a typographical error occurs in the article "Copra Sampling, Inspection and Analysis," by P. W. Tompkins, Curtis & Tompkins, San Francisco. In the first line of the second column, page 23, the word "rely" is written "reply." Because this error destroys the meaning of the sentence, we are most anxious to comply with the author's request for a correction. The paragraph should read:

"The character of cocoanut oil obtained must necessarily reflect the quality or grade of copra from which it was derived and while some crushers have their own buyers on the spot to aid them in their selection, others rely on inspection at points of entry."

Detergents Committee to Meet in Washington April 9

A meeting of the Detergents Committee of the A. O. C. S. will be held on Saturday, April 9 in Room 214 of the Chemistry Building, Bureau of Standards, Washington, D. C. Results of collaborative work and plans for future work on the evaluation of detergents will be discussed.

Dr. Eisenstein Visiting Here

Dr. Alfred Eisenstein, the well known authority on oils and fats, of Vienna, Austria, is spending a few weeks with Arthur D. Little, Inc., consulting chemists and engineers of Cambridge, Mass., with whom he is associated as European correspondent and consultant.

Chemistry Courses Announced

The University of Michigan announces a new bulletin describing courses in chemical engineering which offer opportunities and facilities for special study along this line. The bulletin also contains a prospectus of the Department of Chemistry, which offers advanced courses in colloid and organic chemistry.

Starts Up New Procter & Gamble Crisco Factory

C. B. Cluff, Procter & Gamble Company, Ivorydale, Ohio, has been spending the past month at the Staten Island, New York, plant of his company, starting up a new "Crisco" factory. The Staten Island works also have a complete, new hydrogenation plant and a complete, new oil refinery to operate in connection with the Crisco factory. Mr Cluff is stoping at the Robert Treat in Newark, N. J., and is accompanied by Mrs. Cluff.